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ABSTRACT

This paper presents a portrait of the higher education system in Japan. After providing demographic information about Japan, the document outlines the overall educational structure through brief statements about kindergarten education, compulsory education, the elementary school, the lower secondary school, upper secondary education, curriculum, textbooks, universities and graduate schools, junior college, colleges of technology, special training schools, and miscellaneous schools. The recent development of higher education in Japan, with a focus on governmental planning efforts, is discussed, and statistical data on the number of higher education institutions and students are given. A description of how the university system has been able to respond to Japan's employment needs is detailed. The University of the Air, which is concerned with communications and media education, also is described, along with recent reform efforts in higher education. The last two sections of the paper concern, planning and the management of resources, and international educational exchange efforts. (DB)

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HIGHER EDUCATION IN JAPAN

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HIGHER EDUCATION IN JAPAN

TEIICHI SATO

1. CONTEXT

(1) Introduction to Japan

Japan's total area is 377,835 square kilometers, occupying about 0.3% of the earth's total land area.

Japan's total population stood at 123 million as of December 1989, making Japan the seventh most populous nation in the world. Population growth has slowed in recent years. The annual growth rate averaged 0.7% in the 1980-86 period, lower than the world average of 1.7%. The rate has continued to drop. The nation's birthrate was 10.2 per 1,000 in 1989.

As of 1988, Japan's population density was 324 persons per square kilometer, one of the highest in the world.

The average life expectancy at birth for the Japanese had increased and was 75.5 for males and 81.3 for females as of 1988. This increase is attributed to the fact that infant mortality rates and deaths from epidemics, tuberculosis, and other diseases have declined. The average death rate was 6.4 per 1,000 in 1989.

The age distribution of Japan's population is undergoing a gradual change as both death and birth rates drop. In 1988 children(0 to 14 years) accounted for 19.5% of the total population, adults(15 to 64 years) for 69.2%, and the aged(65 years and older) for 11.2%.

Japan's foreign residents totaled 984,455 as of the end of 1989. The largest groups by nationality were Koreans(681,838), Chinese(137,499), Americans(34,900), and Filipinos(38,925). Under current Japanese law foreigners with special skills are permitted to work in Japan, but ordinary laborers may not.

Japan's 1989 GNP stood at \$2.8 trillion. Real economic growth in 1989 was 4.9%. Its 1988 per-capita GDP stood at \$23,190.

The Japanese economy continues to be in a state of near-full employment. The unemployment rate rarely rises above 3%; in 1989 it stood at 2.3%. Workers in agriculture and other primary industries constituted 8.0% in 1988. The percentage of employment in the tertiary sector was 58.0% in 1988.

Japan is the world's third-largest trading country in both exports and imports. In 1989 exports totaled \$275.2 billion and imports \$210.7 billion. As a result the trade surplus was \$64.4 billion. In 1987, Japan accounted for 10.1% of the world's exports and 6.4% of its imports, excluding the communist bloc. Japan's largest trading partner is the United States, which in 1989 purchased 33.9% of its exports and was the source of 22.9% of its imports. For geographical and historical reasons Japan also has very close trade ties with the neighboring countries of Asia. Exports from Japan to the Asian NIEs(South Korea, Taiwan, Hong Kong, and Singapore) accounted for 19.2% of Japan's total exports in 1989; imports from the NIEs to Japan accounted for 12.9% of Japan's imports.

The Japanese Constitution upholds the principle of equality between men and women. The Labor Standards Law stipulates that men and women shall be paid the same wage for the same job. The Equal Employment Opportunity Law went into effect in 1986. The law calls for equal opportunity for men and women in job recruitment, hiring, placement, and promotion, though it contains no provisions to enforce compliance.

The two major currents of religion in Japan are Buddhism, which was brought to Japan in the sixth century, and Shinto, which developed as the nation's folk religion. Historically, politically, and culturally, Buddhism has had a great influence on the Japanese mentality. Shinto, meanwhile, has survived in the form of traditional beliefs and customs and in such practices as individual prayers and various rites and festivities.

(2) Outline of education in Japan

(a) Fundamental principles of education in Japan

Basic principle for education in Japan are provided for in the Constitution of Japan enacted in 1946 and the Fundamental Law of Education enacted in 1947.

The Constitution provides for the basic right and duty of the people to receive education. The Fundamental Law of Education sets forth the basic national aims and principles of education in accordance with the spirit of the Constitution. More specific provisions relating to the school system, educational administration, financial support and other matters are specified in the School Education Law and many other education laws and regulations which were enacted on the basis of the spirit of the Fundamental Law of Education.

Under these laws a formal education system (a 6-3-3-4 system) was established on the basis of the principles of education such as equal opportunity of education, nine-year compulsory education, co-education, prohibition against partisan political education.

(b) Elementary and secondary education

Kindergarten education

Kindergartens are non-compulsory schools intended to help infants develop their minds and bodies by providing them with an appropriate educative environment. They cater for pre-school children aged three or more.

Compulsory education

In Japan all children between the ages of six and 15 are required by law either to attend both an elementary school and a lower secondary school or to attend a special school for the blind, the deaf or the otherwise handicapped.

The elementary school is intended to provide children between the ages of six and 12 with elementary general education suited to the relevant stage of their mental and physical development.

The lower secondary school aims at providing children

between the ages of 12 and 15 with a general secondary education suited to the level of their mental and physical development, on the basis of the education given in elementary school.

Upper secondary education

The upper secondary school provides children who have completed compulsory education with general and specialized upper secondary education.

Upper secondary school courses may be broadly classified into two types: general and specialized. The latter may be further classified into: agricultural, industrial, commercial, fishery, fine arts and other courses.

Some upper secondary schools offer part-time and correspondence courses to those young workers who wish to receive upper secondary education while working.

Curriculum

Ministry of Education, Science and Culture lays down national standards for the curriculum for all school levels, from kindergarten to upper secondary, so as to secure an optimum national level of education based on the principle of equal educational opportunity for all.

Textbooks

In accordance with the provisions of the School Education Law, all elementary and secondary schools in Japan are required to use textbooks in the classroom teaching of each subject. Textbooks to be used in schools must be either those authorized by the Ministry of Education, Science and Culture, or those compiled by the Ministry itself.

(c) Higher education

Institutions of higher education in Japan include universities, junior colleges and colleges of technology. In addition, special training schools and miscellaneous schools offering advanced courses may be counted as institutions of higher education.

Universities and graduate schools

Universities, as centers of advanced learning, are

intended to conduct teaching and research in depth in specialized academic disciplines and provide students with advanced knowledge. Universities require for admission the completion of upper secondary schooling or its equivalent. They offer courses usually lasting four years (six years for medical, dental and veterinary courses).

A university may set up a graduate school.

A graduate school offers master's degree courses (lasting two years) and doctor's degree courses (usually lasting five years, except for medical, dental or veterinary courses which last four years). Those students who have successfully completed these postgraduate courses may be awarded a master's or doctor's degree under certain conditions.

Junior colleges

Junior colleges aim at conducting teaching and research in depth in specialized subjects and at developing in students such abilities as are required for vocational or practical life. Junior colleges require for admission the completion of upper secondary schooling or its equivalent. They offer courses lasting two or three years.

Colleges of technology

Unlike universities or junior colleges, colleges of technology require for admission the completion of lower secondary schooling. They are intended to conduct teaching in specialized subjects in depth and to develop in students such abilities as are required for vocational life. A college of technology usually offers several courses in engineering and mercantile marine studies. The duration of course is five years for engineering courses, and five and a half years for mercantile marine courses.

Special training schools and others

In addition to the above-mentioned elementary and secondary schools and institutions of higher education, there are a great number of educational establishments called "special training schools" and "miscellaneous schools".

Special training schools are educational institutions of a new type which were created in 1976.

Special training schools offer systematic educational activities aiming to help students develop their abilities required for vocational and daily life, and also to help improve their cultural standards.

They offer courses lasting at least one year.

The courses at special training schools may be classified into three categories: upper secondary courses admitting lower secondary school graduates; advanced courses admitting upper secondary school graduates; and other courses. Those special training schools offering upper secondary courses may be called "upper secondary special training schools", while those offering advanced courses "special training colleges".

Miscellaneous schools are intended to give adults and young people a wide range of opportunities of education similar to formal education offered in secondary schools or institutions of higher education. They provide students of varied ages with knowledge and skills required for their vocational and daily life.

They offer such courses lasting at least three months as dressmaking, cooking, foreign languages, etc.

The size of the higher education in Japan and its recent development are indicated in following statistical tables.

Number of institutions (As of 1 May 1990)

Type of institution	Total	National	Local	Private
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public

Universities	507	96	39	372
Junior colleges	593	41	54	498
Colleges of technology	62	54	4	4

Special training

schools	3,301	166	182	2,953
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Miscellaneous

schools	3,438	4	85	3,349
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Number of students (As of 1 May 1990)

Type of institution	Total	National	Local public	Private
Universities	2,133,277	518,603	64,140	1,550,534
Junior colleges	479,390	18,510	22,647	438,233
Colleges of technology	52,930	45,627	4,126	3,177
Special training schools	791,462	17,433	27,805	746,224
Miscellaneous schools	425,625	82	6,731	418,812

A trend in the enrollment ratio for higher education

Year	1950	6.1%
1960	10.2%	
1970	18.7%	
1980	33.5%	
1989	31.9%	

(Note)

Enrollment ratio: Number of students enrolled in higher education(excluding graduate courses)/
Population of the age group(18~ to 21-year-olds)

Number of students enrolled in higher education(excluding graduate courses): Number of students enrolled in universities(undergraduate courses), and junior colleges, as well as in the 4th and 5th years of colleges of technology

2. QUANTITATIVE EXPANSION

(1) Recent development of higher education in Japan

Higher education in Japan has made a rapid expansion since 1960's, and proceeded to an age of mass higher education.

However, in the course of promotion of such rapid quantitative expansion of higher education, various problems arose such as concentration of universities and junior colleges in large cities, imbalance in the structure of course specialization, and unsatisfactory conditions of education and research at private higher education institutions.

Accordingly, in order to cope properly with such problems and to promote quantitatively and qualitatively balanced development of higher education, systematic planning and administration are in progress since 1976.

A report was produced in March 1976 by a special committee of the Ministry of Education, Science and Culture called the "Ad Hoc Study Committee on Higher Education" on the first five year plan(1976-1980), and then another report in December 1979 by the University Chartering Planning Sub-Committee of the University Charvering Council on the second six year plan (1981-1986).

These plans pointed out that:

a. higher education should be broadly conceived to include not only education at universities, junior colleges and colleges of technology but also education at special training schools and other various forms of education, and should be so made as may be able to respond to diversified educational needs including life-long learning.

b. in planning and administration of universities and junior colleges, emphasis should be placed rather on qualitative substantialization than on quantitative expansion.

c. from the point of view of securing appropriate geographical distribution of universities and junior colleges, concentration in large cities of universities and junior colleges should be restrained, and placement in local areas

should be encouraged.

d. in order to expedite flexibility and mobility, active steps should be taken for such measures as furtherance of inter-university exchanges, promotion of featureful development of universities, and diversification of junior colleges.

The Ministry of Education, Science and Culture, along the lines of these plans, has taken necessary measures in regard to such matters as the establishment of national universities and junior colleges, the authorization of establishment of public and private universities and junior colleges, the elasticization of systems including the University Establishment Standards, and the provision of subsidies to private institutions.

In regard to the way of planning and administration following the period of the Second Six Year Plan, a report was produced in June 1984 by the University Chartering Planning Sub-Committee of the University Chartering Council.

The report contains a plan, covering the period of 1986-1992, which proposes the line of direction of higher education planning and administration as follows:

a. In order to cope properly with the increasing and diversified needs of individuals and of the society, higher education should be qualitatively substantialized from the viewpoint of open higher education institutions, internationalization of higher education institutions, and higher education institutions with specific features.

b. Since the time is coming for the so-called second baby boom generation to come up to universities, the 18-year-old population will rise and fall sharply with 1992 as the peak. Considering that it would be necessary to maintain at the time of the peak(1992) an enrollment ratio similar to that in 1983, the number of enrollable students should be increased in the course of seven years between 1986 and 1992 with regard to universities, junior colleges and colleges of technology.

A university chartering planning sub-committee of a

University Council, which was set up in 1987 as an advisory body at the Ministry of Education, Science and Culture, is now deliberating on a plan covering the period of 1993-2000, when the 18-year-old population will decrease sharply while the ratio of upper secondary school graduates wishing to enter universities and junior colleges may increase. Discussion focuses on an appropriate size of higher education to the population.

Following summary statistical tables describe the development of higher education in Japan over the past two decades.

Number of institutions

Universities

Year	Total	National	Local public	Private
1970	382	75		33 274
1980	446	93		34 319
1990	507	96		39 372

Junior colleges

Year	Total	National	Local public	Private
1970	479	22		43 414
1980	517	35		50 432
1990	593	41		54 498

Colleges of technology

Year	Total	National	Local public	Private
1970	60	49		4 7
1980	62	54		4 4
1990	62	54		4 4

Number of Students

Universities

Year	Total	Female	National	Local public	Private
1970	1,406,521	252,745 (18.0%)	309,587	50,111	1,046,823
1980	1,835,312	405,529 (22.1%)	406,644	52,082	1,376,586
1990	2,133,277	584,104 (27.4%)	518,603	64,140	1,550,534

Junior colleges

Year	Total	Female	National	Local public	Private
1970	263,219	217,668 (82.7%)	9,886	16,136	237,197
1980	371,124	330,468 (89.0%)	14,685	19,002	337,437
1990	479,390	438,444 (91.5%)	18,510	22,647	438,233

Colleges of technology

Year	Total	Female	National	Local public	Private
1970	44,314	673 (1.5%)	33,091	3,919	7,304
1980	46,348	917 (2.0%)	39,211	4,018	3,119
1990	52,930	4,677 (8.8%)	45,627	4,126	3,177

Following statistical tables tell trends in student enrollment as well as above tables.

Number of students at universities (As of 1 May 1990)

Type of course	Total	Female	National	Local	Private
				public	
Total	2,133,277	584,104	518,603	64,140	1,550,534
			(27.4%)		
Undergraduate					
course	1,988,575	554,667	433,166	55,883	1,499,526
		(27.9%)			
Master's courses	61,884	10,294	39,484	2,392	20,008
		(16.6%)			
Doctor's courses	28,354	4,272	18,401	1,498	8,455
		(15.1%)			

Percentage distribution of university (undergraduate) students by major field of study (As of 1 May 1990)

Humanities	15.2%
Social sciences	39.6%
Natural sciences	3.4%
Engineering	19.6%
Agriculture	3.4%
Medicine and dentistry	3.5%
Pharmacy	1.9%
Home economics	1.8%
Education	7.1%
Others	4.5%

Percentage distribution of junior college students
by major field of study (As of 1 May 1990)

Humanities	25.8%
Social sciences	12.7%
General education	3.0%
Engineering	5.0%
Health	5.7%
Home economics	24.7%
Education	16.6%
Agriculture	0.8%
Others	5.8%

3. HIGHER EDUCATION AND MANPOWER DEVELOPMENT

As far as the university system is concerned, measures have been taken to enable the university education to respond to social changes. In parallel with such measures, innovative universities have been established as follows to respond to new social needs:

a. Creation of universities of technology and science in 1976 which mainly aim at accepting the graduates from colleges of technology to the third year of an undergraduate course and training of engineers equipped with practical ability, and which conduct integrated education of undergraduate courses and graduate school courses leading to a master's degree. These universities are the Nagaoka University of Technology and Science, and the Toyohashi University of Technology and Science.

b. Creation of innovative universities of education, consisting of graduate schools which are to secure for in-service teachers an opportunity of making study and in-depth study, and undergraduate departments which are to train teachers of elementary education. These universities are: the Joetsu University of Education established in 1978, the Hyogo University of Education in 1978, and the Naruto University of Education in 1981.

It is difficult to foresee precisely trends of manpower needs of graduates from higher education institutions. However, it is considered that needs for specialized engineers will increase in such fields as electronics and electricity, biotechnology, material(ceramics,etc.) and infomatics.

As far as physicians and dentists are concerned, the current target of training has nearly been achieved. As to the training of teachers of elementary and secondary education, it is not considered necessary to expand it for the time being, in view of recent decreasing tendency of the number of birth and other elements.

Efforts have been made to enable universities and other higher education institutions to train manpower in response to

social needs, for example in past years, by enlarging capacity of science and technology departments and creating colleges of technology in response to rapid increase of demands for scientists and technologists accompanying the development of the world of industry, or by founding and enlarging medical colleges and medical departments in order to eliminate the shortage of physicians.

However, it cannot be said that fields of specialization of universities always fit to the fields of vocations. Generally speaking, only a little has been expected from the results of specialized education itself at universities in regard to graduates of humanities branches and social sciences branches of democratized universities in Japan, due partly to the fact that educational contents are not always practically oriented. This may lead to such an evaluation that university graduates were enabled to respond flexibly in regard to the fields of employment. What with this and that, in-service training within respective enterprises is thoroughgoing in Japan.

The position of employment of those who were graduated from higher education institutions in March 1990 is as shown in the following table.

Employment ratio (number of those employed/number of graduates)		
Universities	Male	81.0%
	Female	81.0%
	Total	81.0%
Master's		
Graduate schools	courses	73.0%
	Doctor's courses	65.1%
Junior colleges	Male	72.9%
	Female	88.1%
	Total	87.0%
Colleges of technology		85.9%

4. OTHER RESPONSIBILITIES OF HIGHER EDUCATION TO SOCIETY

The University of the Air was established in 1983 with the aim of providing as many people as possible with learning opportunities by offering them a university education based on a new approach, effectively using television, radio and other diverse media. The university was thus intended to cope with the age of lifelong learning. It started to admit students in April 1985.

It is expected that the University of the Air takes root as a new type of university which provide, with flexibility and elasticity, university education widely to the public. It is considered that a large number of men and women of society engaged in different occupations with a variety of social experiences as well as housewives would come into the University of the Air.

It is further expected that the University of the Air will, through association and co-operation with other higher education institutions, contribute to the improvement of higher education in Japan, while other higher education institutions will make active use of the functions of the University of the Air by such means as mutual accrediting of credits, listening in to the lessons of the University of the Air, and utilization of teaching materials developed by the University of the Air.

For the time being, the service area of the University of the Air is limited to the Kanto district including Tokyo. The number of students as of 1 May 1990 is 20,912 for full course regular students and 8,789 for non-regular students of specific courses or elective courses. The way of direction and the expansion of service area of the University of the Air have to be examined in the light of the degree of enhancement of the wishes of the people for life-long learning, the progress of information society, the situation of association and co-operation with other higher education institutions, and other relevant elements.

The following categories of students can be found in the University of the Air.

a. Regular students: "Regular students" are students who wish to complete an undergraduate course after obtaining a specified number of credits for a set of subjects. On completing an undergraduate course, they are awarded a Bachelor of Liberal Arts.

b. Special students: Those who are not qualified for university entrance are allowed to enter the University as "special students". They will be able to become "regular students" on acquiring a specified number of credits.

c. Non-degree students: "Non-degree students" are those who do not wish to complete an undergraduate course. They may select one or more subjects in accordance with their own interest. There are no entrance requirements for non-degree students, except for that they must be aged 18 years or more. Non-degree students may enroll themselves in the University either for one year or for one semester(six months).

d. Seminar students: Students engaged in their studies in specific subjects for one year after their graduation from some university.

5. INNOVATIONS AND REFORM

If Japan is to achieve further development and to make more contributions to the international community, it is important for the country to carry out constantly the improvement and reform of universities and other institutions of higher education.

In August 1984, a National Council on Educational Reform was set up as an ad hoc advisory committee to the Prime Minister.

For three years the Council energetically engaged in deliberations on a wide range of subjects, and submitted four successive reports to the Prime Minister during the three years, finishing its work in August 1987. Among eight major subjects which the Council identified for its consideration was enhancement of higher education and individualization of higher education institutions. In its fourth report, the Council presented three basic points of view for educational reform: (1) the principle of putting emphasis on individuality; (2) transition to a lifelong learning system; and (3) coping with various changes in our society, including internationalization in different sectors and the spread of information media.

In September 1987, a University Council was set up as an advisory body which is to consider future directions for universities and relevant strategies for university reform.

In order to enable universities and other institutions of higher education to meet the expectations of the public, the University Council is now deliberating on specific measures for heightening, individualizing and invigorating educational and research activities in these institutions.

Some specific subjects to be considered by the University Council are as follows:

Improvement of the quality of educational and research activities

- * Improvement and reform of graduate schools

- * Review of the existing system of awarding graduate degrees

Development of distinctive educational activities and of diverse types of institutions

* Review of the existing standard regulations for the establishment of universities

* Improvement of general education programs and foreign language teaching

* Development of distinctive junior colleges and colleges of technology

* Securing collaboration among different types of institutions of higher education

Vitalization of educational and research activities of universities

* Evaluation of university activities

6. PLANNING AND MANAGEMENT OF RESOURCES

(1) Administrative and financing mechanism govering higher education

Universities, junior colleges and colleges of technology may be founded only by the State, local public bodies and school juridical persons, with an exception that the University of the Air has been founded by a juridical person having a special status and financed by the State.

In case a local public body or a school juridical person wishes to establish a university, junior college or college of technology, authorization by the Minister of Education, Science and Culture must first be obtained.

Special training schools may be established by the State, local public bodies and school juridical persons. In addition, they may be founded by other bodies than school juridical persons.

Apart from the case where the State establishes a special training school, those who wish to establish a special training school must first obtain authorization by the Prefectural Governor concerned in the case of a private one, and by the Prefectural Board of Education concerned in the case of a public one.

The comparative weight of private institutions is very high among higher education institutions in Japan.

(2) Financing of universities, junior colleges and colleges of technology

For the sake of financing national educational establishments, a scheme of special account called a Special Account for National Educational Establishments has been established. This account is independent from the General Account of the national government. The revenue of the Special Account for National Educational Establishments consists of the

transfer from the General Account, self-earning income (including school fee income, attached hospital income, etc.) and other incomes. Dependent on this revenue, appropriation of fund is made to respective national educational establishments.

Public universities, junior colleges and colleges of technology are financed partly by the subsidy from the national treasury and mostly by the fund from the respective local public bodies which established the institutions in question.

As to private universities, junior colleges and colleges of technology, it is the principle that their financing be self-supporting. However, subsidies are being granted by the State in regard to their current expenses in order mainly to maintain and improve their educational conditions and alleviate financial burden on students in their continuation of study. The national subsidy for current expenses constitutes less than 20% of the total expenses, while the remaining over 80% depends on self-financed resources such as the fee from students, voluntary contributions and activity income.

(3) Financial aid to Students

Financial aid programs for students are provided by the Japan Scholarship Foundation supported by national government funds. They are also offered by local governments, non-profit corporations for financial aid to students, individual educational institutions and others.

The Japan Scholarship Foundation provides scholarship loans for able students who find financial difficulty in attending educational institutions.

The scholarship loans provided by the Foundation are of two types: loans bearing no interest and loans bearing low interest.

In 1990 the Foundation provided scholarship loans to about 450,000 students.

7. COOPERATION

(1) International exchange of science

Scientific cooperation at the international level greatly contributes to the advancement not only of academic standards in Japan but also of scientific research in the world.

In order to promote international exchanges at universities and related institutes, Ministry of Education, Science and Culture carries out various programs either directly or through Japan Society for the Promotion of Science.

As for the cooperation with developing countries, Japan Society for the Promotion of Science is entrusted with administering various programs mainly for Southeast Asian countries. These include exchanges under the Core University System, assistance for the preparation of Ph.D. dissertations and other forms of general exchanges and information provision.

(2) Student exchange

Exchange of students with other countries has a great role to play in the improvement of the level of educational and research standards both in Japan and in the other countries concerned. It also contributes to an increase in mutual understanding and friendship between Japanese and other peoples. Acceptance of students from developing countries has a great significance in Japan's cooperation with these countries in developing their qualified manpower.

During recent years the number of foreign students studying in Japan has been rapidly increasing. In 1989 approximately 31,000 foreign students from more than 110 countries were studying in Japanese universities and colleges.

The Ministry of Education, Science and Culture has a plan to increase the number of foreign students studying in Japan to 100,000 by the beginning of the 21st century. With this as a goal, it has been carrying out a wide range of measures on an

integral basis. The measures include: the expansion of the Japanese Government Scholarship Program; the improvement of teaching and guidance for foreign students; the improvement of living accommodations for these students; and the provision of financial and other assistance to foreign students other than those granted a government scholarship; and the wider dissemination of relevant information and documents related to study in Japan.